

# Brendan Szuwalski

## Mechanical Engineer

### Personal Info

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### Skills

3D and 2D Modeling

Technical Drawings

GD&T

Leadership

Abaqus

Material Analysis and Selection

Parameter Driven CAD

Skeleton Modeling

### Awards

- Best Senior Design Project Winner at the Whiting School of Engineering's Design Day, 2018
- 2018 Student Leadership Award for Outstanding Contributions to Student Groups
- JHU Dean's List: Fall 2015, Spring 2016, Fall 2016, Spring 2017, Fall 2017, Spring 2018

Talented Mechanical Engineer with strong background in Automotive Racing. Proven experience developing innovative designs for Suspension and Drivetrain including integrated innerwheel assemblies, centerlock off road racing rims and custom electric motor projects. For more information on my projects please visit my website, [BrendanSzuwalski.com](http://BrendanSzuwalski.com).

## Work Experience

Sept 2018 – Present

### Powertrain and Drivetrain Engineer

*Formula Student Team Delft – Delft, Netherlands*

- Lead a team in developing a complex innerwheel suspension and transmission system
- Successfully developed a **traction envelope model** for our **custom tires** to **enable custom motor** parameter selection
- Developed a wiring system to communicate between **4 motors**, **13 PCB's** and the Accumulator while also being able to handle **80kW**

Aug 2014 – Jun 2018

### Team Captain

*Blue Jay Racing – Baltimore, Maryland*

- Lead a team of 20 engineering students focused on designing a single seat, off-road race car
- Implemented several structural changes, both as an engineer and as a leader, that continue to benefit the team
- Planned and directed projects focused on improving areas such as vehicle drive-ability, manufacturing accuracy and predictive design

Jun 2018 – Aug 2018

### Engineering Intern III

*ThorLabs – Baltimore, Maryland*

- Designed two autonomous systems that increase the production capacity of the clean room manufacturing line to over 1,000 laser chips per day, up from just over 200, without requiring an increase in clean room size or staff

May 2016 – Aug 2016

### Engineering Intern III

*Maritime Applied Physics Corp – Baltimore, Maryland*

- Designed Lift Critical automated railing systems compliant with Naval Guidelines and an Operational Readiness percentage of 97%
- System capable of folding out of the way of the deployment and recovery of towed UAV's
- Conceived and developed a self-diagnostic system

## Education

Sept 2018 – Jul 2020

### MSc: Mechanical Engineering

*Delft University of Technology – Delft, Netherlands*

- Focusing of **Vehicle Engineering** with a specialization in **Materials**
- Expected to graduate with 7.3/10 GPA

Sept 2014 – May 2018

### B.S.: Mechanical Engineering

*The Johns Hopkins University – Baltimore, Maryland*

- GPA: 3.56/4.0